Remarks

The Office action mailed February 5, 2008, has been reviewed and carefully considered. Claims 26, 28, 29 and 57 have been amended. Claims 37 and 38 have now been canceled. Withdrawn method claims 1-25, 35, 37, 39 and 40 have been canceled without prejudicing the right to file a divisional application. Entry of these amendments is respectfully requested.

35 U.S.C. §103 Rejections

Claims 26-29, 36, 38, 41-46 and 55-59 have been rejected under 35 U.S.C. §103 over Simon et al. in view of Tam, Bridon et al., Silvera et al., Hirsch et al., and Tsujimoto et al. Claims 36, 41-43, 46, 56 and 58 also have been rejected under 35 U.S.C. §103 over the above-listed references plus Silvera et al., Hirsch et al., and Tsujimoto et al. Applicants continue to traverse these rejections.

The importance of the length of the peptide sequences is emphasized by deleting the numerical qualifier "about" from claims 26, 28, 29 and 57. Claims 26 and 29 also have been amended to specify that at least one simian immunodeficiency virus (SIV) is represented in at least one of the detection multiple antigenic peptides or the differentiation multiple antigenic peptides. Such an immunoassay is especially useful for detecting SIV in non-human primates and SIV-like infections in humans, detecting previously unrecognized SIV-like retroviruses in humans and non-human primates, and differentiating between specific SIV strains (see page 9 of the application). None of the cited references even disclose a peptide sequence of less than 16 amino acid residues for detecting SIV meaning that one claim element is completely missing from the combination of cited references. Accordingly, since the asserted combination does not disclose the presently claimed invention the obviousness rejection must be withdrawn for this reason alone.

Moreover, none of the relied upon references assign significance to the peptide sequence length for detecting SIV in particular. Hence, a person reviewing these references would have no reason to focus on the peptide sequence length. The Office action states that "it has long been recognized in the art of diagnostics that the shorter the peptide, the more potentially specific are the antibody-antigen reactions." The key word in the preceding sentence is "potentially." Immunological responses to specific peptides are notoriously unpredictable. Consequently, until

the shorter length SIV peptides were actually constructed and successfully tested by the present applicants the results could not have been predicted. In this regard, the present application includes data demonstrating surprisingly effective sensitivity and specificity results for the presently claimed immunoassay (see Table 3 on page 24 of the application).

Applicants also note that the presently claimed shorter peptide lengths are designed not only for differentiating SIV, but also for detecting the presence of SIV. As explained on page 15 of the present application:

> "The specificity of peptides generally tends to increase as the length of the peptides decreases, but shorter peptides may also have reduced reactivity, which can reduce the sensitivity of the test. The MAP structure can compensate for this reduced sensitivity. In particular, the plurality of shorter linear peptides in the presently disclosed MAPs enables optimization for specificity and sensitivity. The specificity is enhanced by shorter linear peptide portions that are more antigenicity focused. The sensitivity is enhanced by the plurality of shorter linear peptides."

Thus, the shorter peptide lengths synergistically enhance both sensitivity and specificity. None of the cited prior art recognized such unexpected synergy with respect to detecting SIV.

It is submitted that the application is in condition for allowance. Should there be any questions regarding this application, examiner Snyder is invited to contact the undersigned attorney at the telephone number shown below.

Respectfully submitted,

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